

WHAT IS CLAIMED IS:

1    1. A computer-implemented method for managing experiments relating to automated  
2 processing technology, comprising the steps of:

3                 (A) receiving an experiment order, the experiment order including at least some  
4 deviation from a base process capable of operating in an automated environment;

5                 (B) obtaining an approval of the experiment order;

6                 (C) translating and storing at least a portion of the experiment order into processing  
7 data suitable for implementation by said automated environment; and

8                 (D) causing the experiment to be executed in conjunction with at least some portion of  
9 said base process by the automated environment, in accordance with said processing data.

1    2. The method of claim 1, wherein the obtaining step further includes the steps of storing  
2 data defining the experiment order, distributing the experiment order to a plurality of users,  
3 obtaining changes to the experiment order from at least one of the users, and receiving the  
4 approval for the experiment order from at least one user.

5    3. The method of claim 1, further comprising the step of attaching documents to the  
6 experiment request.

7    4. The method of claim 1, further comprising the step of publishing information indicating a  
8 state change of the experiment request, responsive to a document attached to the experiment  
9 request or to a change in state of the experiment order.

1    5. The method of claim 1, wherein the translating step further includes the step of receiving  
2 the processing data.

1    6. The method of claim 5, wherein:

2                 the experiment produces at least one test product and at least one production product;  
3 and

4 wherein the processing data includes an indication of the base process, the changes to the  
5 base process, and a split-off of a control set; and

6 wherein the split-off of a control set produces the at least one production product  
7 according to the base process and the changes to the base process produce the at least one test  
8 product.

1 7. The method of claim 1, further comprising the step of receiving and storing the results of  
2 the execution of the experiment.

1 8. The method of claim 1, wherein the automated environment produces semiconductor  
2 technology.

1 9. A computer-implemented system for managing experiments relating to automated  
2 processing technology, comprising:

3 (A) an experiment order, the experiment order including at least some deviation from  
4 a base process capable of operating in an automated environment;

5 (B) an approval of the experiment order, obtained in response to receipt of the  
6 experiment order;

7 (C) processing data suitable for implementation by said automated environment,  
8 translated from at least a portion of the experiment order; and

9 (D) wherein said automated environment causes the experiment to be executed in  
10 conjunction with at least some portion of said base process by the automated environment, in  
11 accordance with the processing data.

1 10. The system of claim 9, wherein the approval further includes stored data defining the  
2 experiment order, a distribution of the experiment order to a plurality of users, stored changes to  
3 the experiment order from at least one of the users, and received approval for the experiment  
4 order from at least one user.

1 11. The system of claim 9, further comprising at least one document attached to the  
2 experiment request.

1    12. The system of claim 9, further comprising information indicating a state change of the  
2 experiment request, published responsive to a document attached to the experiment request or to  
3 a change in state of the experiment order.

1    13. The system of claim 9, wherein the processing data is received from a user.

1    14. The system of claim 13, wherein:

2                the experiment produces at least one test product and at least one production product;  
3 and

4                wherein the processing data includes an indication of the base process, the changes to the  
5 base process, and a split-off of a control set; and

6                wherein the split-off of a control set produces the at least one production product  
7 according to the base process and the changes to the base process produce the at least one test  
8 product.

9    15. The system of claim 9, wherein the results of the execution of the experiment are  
10 received and stored.

11   16. The system of claim 9, wherein the automated environment produces semiconductor  
12 technology.

13   17. A computer-readable medium comprising instructions being executed by a computer, the  
14 instructions including a computer-implemented method for managing experiments relating to  
15 automated processing technology, the instructions for implementing the steps of:

16        (A) receiving an experiment order, the experiment order including at least some  
17 deviation from a base process capable of operating in an automated environment;

18        (B) obtaining an approval of the experiment order;

19        (C) translating and storing at least a portion of the experiment order into processing  
20 data suitable for implementation by said automated environment; and

21        (D) causing the experiment to be executed in conjunction with at least some portion of  
22 said base process by the automated environment in accordance with the processing data.

1    18.    The medium of claim 17, wherein the obtaining step further includes the steps of storing  
2    data defining the experiment order, distributing the experiment order to a plurality of users,  
3    obtaining changes to the experiment order from at least one of the users, and receiving the  
4    approval for the experiment order from at least one user.

1    19.    The medium of claim 17, wherein the computer program further comprises the step of  
2    attaching documents to the experiment request.

1    20.    The medium of claim 17, wherein the computer program further comprises the step of  
2    publishing information indicating a state change of the experiment request, responsive to a  
3    document attached to the experiment request or to a change in state of the experiment order.

1    21.    The medium of claim 17, wherein the translating step further includes the steps of  
2    receiving the processing data.

1    22.    The medium of claim 21, wherein:

1                 the experiment produces at least one test product and at least one production product;  
2                 and

1                 wherein the processing data includes an indication of the base process, the changes to the  
2                 base process, and a split-off of a control set; and

1                 wherein the split-off of a control set produces the at least one production product  
2                 according to the base process and the changes to the base process produce the at least one test  
3                 product.

1    23.    The medium of claim 17, wherein the computer program further comprises the step of  
2    receiving and storing the results of the execution of the experiment.

1    24.    The medium of claim 17, wherein the automated environment produces semiconductor  
2    technology.

1    25.    A computer-implemented method for managing experiments relating to semiconductor  
2    technology, comprising the steps of:

- 3           (A) receiving an experiment order, the experiment order including at least some  
4 deviation from a base process capable of operating in an automated environment;
- 5           (B) obtaining an approval of the experiment order;
- 6           (C) translating and storing at least a portion of the experiment order into processing  
7 data suitable for implementation by said automated environment; and
- 8           (D) causing the experiment to be executed in conjunction with at least some portion of  
9 said base process by the automated environment in accordance with the processing data;
- 10          (E) wherein the obtaining step further includes the steps of storing data defining the  
11 experiment order, distributing the experiment order to a plurality of users, obtaining changes to  
12 the experiment order from at least one of the users, and receiving the approval for the experiment  
13 order from at least one user;
- 14          (F) wherein the experiment produces at least one test product and at least one  
15 production product; and wherein the processing data includes an indication of the base process,  
16 the changes to the base process, and a split-off of a control set; and wherein the split-off of a  
17 control set produces the at least one production product according to the base process and the  
18 changes to the base process produce the at least one test product.

1       26. A computer-implemented system for managing experiments relating to semiconductor  
2 technology, comprising:

- 3           (A) an experiment order, the experiment order including at least some deviation from  
4 a base process capable of operating in an automated environment;
- 5           (B) an approval of the experiment order, obtained in response to receipt of the  
6 experiment order;
- 7           (C) processing data suitable for implementation by said automated environment,  
8 translated from at least a portion of the experiment order;

9           (D) wherein said automated environment causes the experiment to be executed in  
10 conjunction with at least some portion of said base process by the automated environment in  
11 accordance with the processing data;

12           (E) wherein the approval further includes stored data defining the experiment order, a  
13 distribution of the experiment order to a plurality of users, stored changes to the experiment  
14 order from at least one of the users, and received approval for the experiment order from at least  
15 one user; and

16           (F) wherein the experiment produces at least one test product and at least one  
17 production product; and wherein the processing data includes an indication of the base process,  
18 the changes to the base process, and a split-off of a control set; and wherein the split-off of a  
19 control set produces the at least one production product according to the base process and the  
20 changes to the base process produce the at least one test product.

21 27. A computer-readable medium comprising instructions being executed by a computer, the  
22 instructions including a computer-implemented method for managing experiments relating to  
23 automated processing technology, the instructions for implementing the steps of:

24           (A) receiving an experiment order, the experiment order including at least some  
25 deviation from a base process capable of operating in an automated environment;

26           (B) obtaining an approval of the experiment order;

27           (C) translating and storing at least a portion of the experiment order into processing  
28 data suitable for implementation by said automated environment; and

29           (D) causing the experiment to be executed in conjunction with at least some portion of  
30 said base process by the automated environment in accordance with the processing data;

31           (E) wherein the obtaining step further includes the steps of storing data defining the  
32 experiment order, distributing the experiment order to a plurality of users, obtaining changes to  
33 the experiment order from at least one of the users, and receiving the approval for the experiment  
34 order from at least one user;

15 (F) wherein the experiment produces at least one test product and at least one  
16 production product; and wherein the processing data includes an indication of the base process,  
17 the changes to the base process, and a split-off of a control set; and wherein the split-off of a  
18 control set produces the at least one production product according to the base process and the  
19 changes to the base process produce the at least one test product.